

# Houston Christian Broadcasters, Inc.

KSAO (FM) San Angelo, Texas

Facility ID # 14517

BMLED-20111011AFG

July 24, 2020

Houston Christian Broadcasters, Inc. (HCB) asks permission to modify KSAO San Angelo, Texas to reduce power from 100 kilowatts to 80 kilowatts at the same center of radiation. This 2 db change does not change class of station. KSAO (FM) is a non-commercial educational station operating on a commercial band channel. HCB wants to change antennas from an 8 bay to a six bay using the same transmitters and feed line.

No change of location is proposed. For completeness we're including a channel study

ComStudy 2.2 search of channel 230 (93.9 MHz Class C1) at 31-42-11.0 N, 100-19-20.0 W.

CALL	CITY	ST CHN	CL	DIST	SEP	BRNG	CLEARANCE
KSAO	SAN ANGELO	TX 230	C1	0.00	245.00	90.0	-245.0
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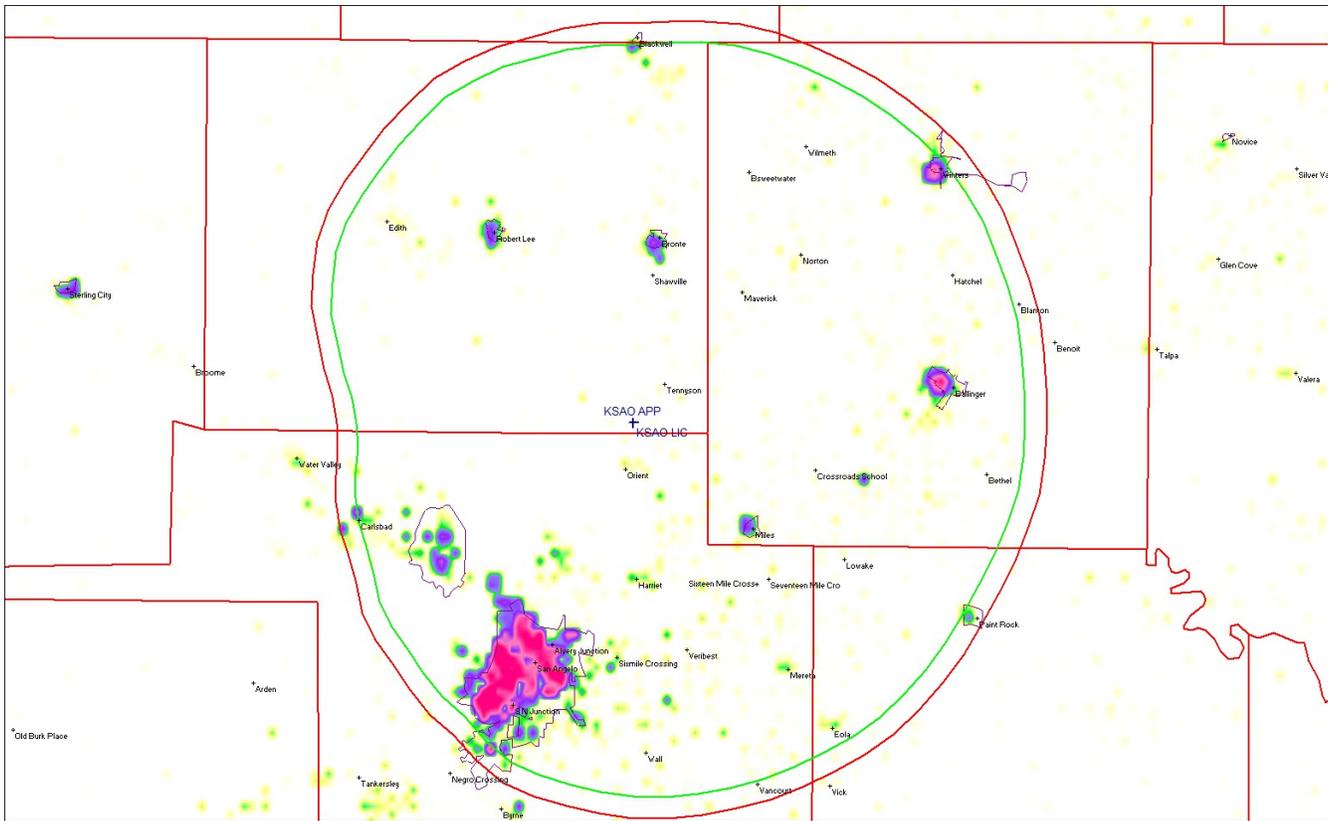
Of no consequence: KSAO is subject of this application.

KVVO-LP	ABILENE	TX 231	LP100	99.76	100.00	33.6	-0.2
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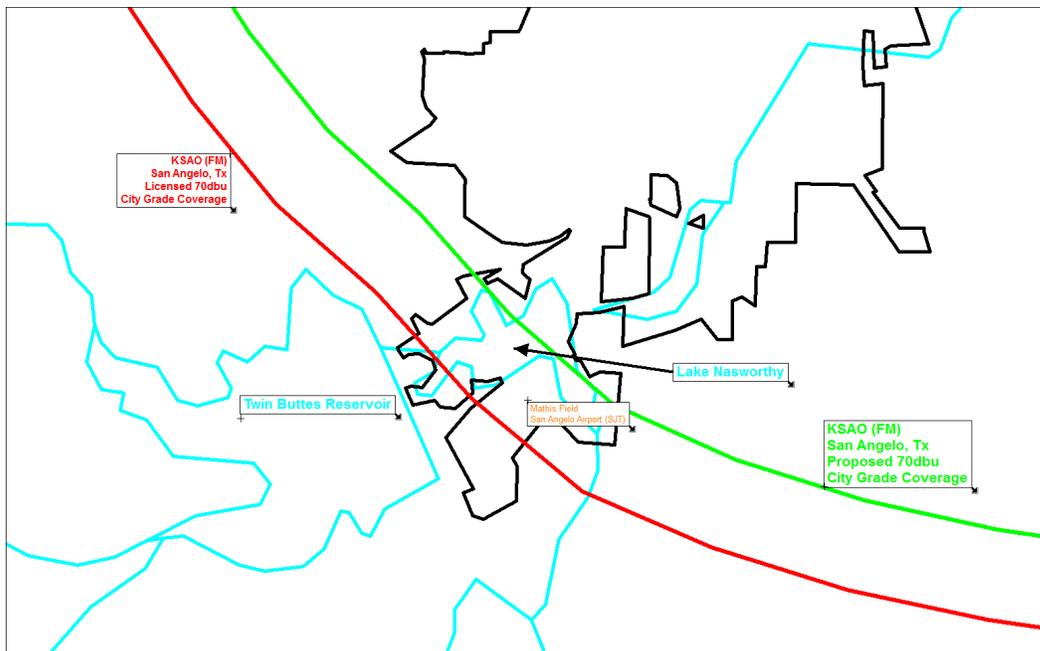
Within rounding margin. No actual site change.

KSEY-FM	SEYMOUR	TX 230	C2	226.96	224.00	25.3	3.0
KXFS*	RANKIN	TX 229	C3	152.51	144.00	248.4	8.5
KBGT	BUFFALO GAP	TX 227	C3	85.27	76.00	42.7	9.3
KPTJ	GRAPE CREEK	TX 283	C3	37.72	24.00	218.9	13.7
DKMJP*	JAYTON	TX 231	C2	175.67	158.00	349.5	17.7
DKEPL	ROSCOE	TX 228	A	93.79	75.00	340.7	18.8
KXFS	RANKIN	TX 229	C3	162.34	144.00	251.8	18.3
K232FG	SAN ANGELO	TX 232	D	28.37	0.00	208.4	28.4

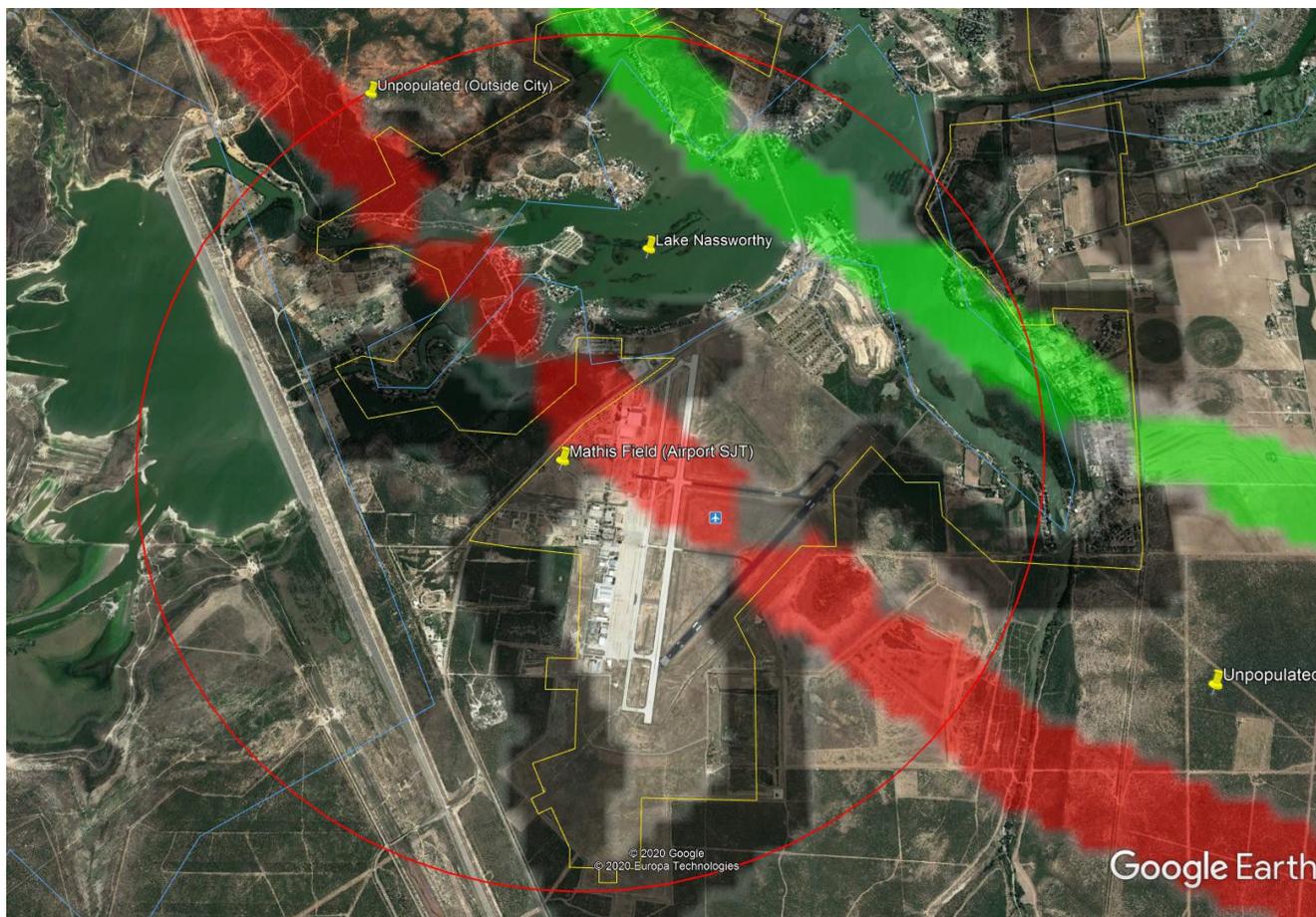
San Angelo is southwest of the KSAO (FM) tower. City Grade coverage is shown in red and the proposed change in green. This will slightly reduce coverage across the most distant part of the city of license. This area was apparently annexed into San Angelo sometime after the mid 1980's when the station (then KWLW (FM)) moved to the present site. Most of the loss area is Lake, Airport or unpopulated desert hills.



City Coverage: The FCC regularly grants waivers of city grade coverage where the request will cover at least 80% of an area or it's population. Proposed KSAO (FM) coverage is 90% and population is 98%. Much of the loss area is unpopulated, consisting of lakes, Mathis Field Airport and rough terrain areas with no roads. As noted before, some or all of this "Loss" area was added to the city after 93.9 was licensed at it's present site.

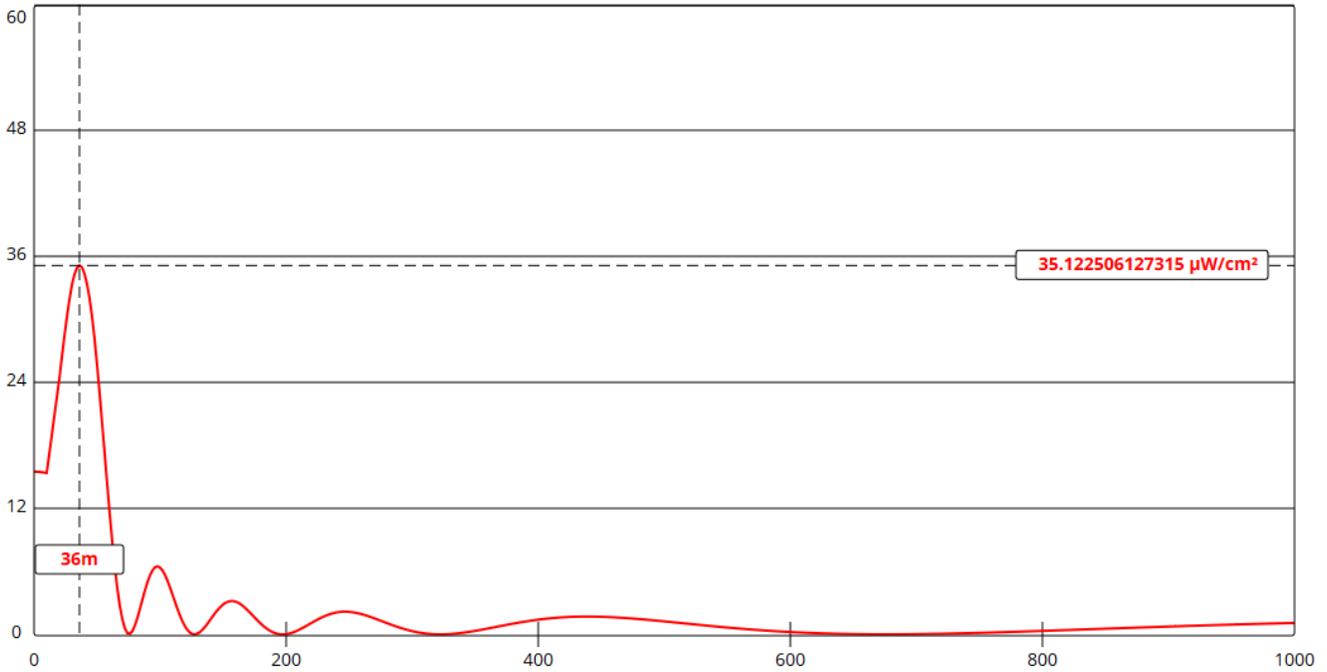


This information is superimposed on a map from Google earth Pro. The yellow polygon is the southern part of the city of San Angelo. Blue areas are bodies of water. There are a few populated streets outside the green contour but population is small (less than 2% of city) and some is weekend houses.



## KSAO (FM) RF Showing

The proposed six bay is an ERI SHP-6 AC We used FCC online FM model program to check the RF levels. Site is extremely rural, a rocky hill off the farm to market roads. Signs are posted at the property line, where the dirt path comes onto the hilltop and at the building and tower base. Maximum RF level is 17.5% of General Public level.



[View Tabular Results +](#)

Channel Selection	Channel 230 (93.9 MHz) ▾		
Antenna Type +	EPA Type 3: Opposed U Dipole ▾		
Height (m)	<input type="text" value="116"/>	Distance (m)	<input type="text" value="1000"/>
ERP-H (W)	<input type="text" value="100000"/>	ERP-V (W)	<input type="text" value="100000"/>
Num of Elements	<input type="text" value="6"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	

This application was prepared by me using information from the various online databases. It is believed accurate.

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